

WHAT IS CLAIMED IS:

1. A throttle valve opening control device for an intake side of an engine, wherein said engine includes a plurality of intake passages formed in a throttle body, a plurality of valve shafts being provided in the throttle body, a plurality of throttle valves for opening and closing the intake passages are mounted on the valve shafts, whereby throttle valve openings are operatively controlled by a rotational movement of the valve shafts via a throttle grip, said throttle valve opening control device comprising:

a drum being connected to the throttle grip by a wire,
an input shaft which is integrally mounted in the drum,
an output shaft which is operatively connected to the input shaft by a power transmission device,
a connecting member which connects the output shaft to the valve shafts, and
an actuator which drives the power transmission device to provide the relative rotation of the output shaft with respect to the input shaft, wherein the input shaft and the output shaft have respective axes thereof arranged along a straight line, the actuator is arranged in a position parallel to the output shaft, and the output shaft and the actuator are juxtaposed substantially vertically along a centerline of the intake passage.

2. A motorcycle comprising the throttle control device according to claim 1.

3. The throttle valve opening control device according to claim 1, wherein the connecting member includes a link mechanism operatively connecting the output shaft with the valve shafts.

4. The throttle valve opening control device according to claim 3, wherein said link mechanism includes a plurality of linkage arms connecting said output shaft to said valve shafts.

5. The throttle valve opening control device according to claim 1, further comprising a throttle opening sensing operatively connected to a valve shaft.

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6. The throttle valve opening control device according to claim 1, further comprising a drive motor operatively connected with gears to the output shaft.

7. The throttle valve opening control device according to claim 1, wherein the power transmission device includes a split-case portion rotatably mounted on the input shaft and on the output shaft by a bearing.

8. A throttle valve opening control device for an engine having a throttle body formed on an intake side of the engine, a plurality of intake passages being formed in the throttle body, a plurality of valve shafts being provided in the throttle body, a plurality of throttle valves for opening and closing the intake passages being mounted on the valve shafts, said throttle valve opening control device comprising:

an input shaft being operatively connected to a throttle grip;

an output shaft being connected to the input shaft by a power transmission device;

a connecting member which connects the output shaft to the valve shafts, and

an actuator which drives the power transmission device to provide a relative rotational movement of the output shaft with respect to the input shaft and via the throttle grip, wherein the intake passages are arranged in parallel in a fore-and-aft direction of the engine, the throttle valve opening control device is arranged above a plane which includes the respective valve shafts of the intake passages, and the rotational movement is transmitted from the output shaft to the valve shafts which are disposed below the output shaft.

9. The throttle valve opening control device according to claim 8, wherein the connecting member includes a link mechanism operatively connecting the output shaft with the valve shafts.

10. The throttle valve opening control device according to claim 9, wherein said link mechanism includes a plurality of linkage arms connecting said output shaft to said valve shafts.

11. The throttle valve opening control device according to claim 8, further comprising a throttle opening sensing operatively connected to a valve shaft.

12. The throttle valve opening control device according to claim 8, further comprising a drive motor operatively connected with gears to the output shaft.

13. The throttle valve opening control device according to claim 8, wherein the power transmission device includes a split-case portion rotatably mounted on the input shaft and on the output shaft by a bearing.

14. A motorcycle comprising the throttle control device according to claim 8.

15. A throttle valve opening control device for an engine having a throttle body formed on an intake side of the engine, a plurality of intake passages being formed in the throttle body, a plurality of valve shafts being provided in the throttle body, a plurality of throttle valves for opening and closing the intake passages being mounted on the valve shafts, upper fuel injection valves for injecting fuel into an interior of the intake passages are arranged above the intake passages and lower fuel injection valves for injecting fuel into an interior of the engine are arranged at lower side portions of the intake passages, said throttle valve opening control device comprising:

an input shaft being operatively connected to a throttle grip;

an output shaft being connected to the input shaft by a power transmission device;

a connecting member which connects the output shaft to the valve shafts; and

an actuator which drives the power transmission device to provide the relative rotation of the output shaft with respect to the input shaft; wherein the throttle valve opening control device is capable of being arranged between the upper fuel injection valves and the lower fuel injection valves.

16. A motorcycle comprising the throttle control device according to claim 15.
17. The throttle valve opening control device according to claim 15, wherein the connecting member includes a link mechanism operatively connecting the output shaft with the valve shafts.
18. The throttle valve opening control device according to claim 17, wherein said link mechanism includes a plurality of linkage arms connecting said output shaft to said valve shafts.
19. The throttle valve opening control device according to claim 15, further comprising a throttle opening sensing operatively connected to a valve shaft.
20. The throttle valve opening control device according to claim 15, wherein the power transmission device includes a split-case portion rotatably mounted on the input shaft and on the output shaft by a bearing.